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AUTHOR Freeland, Kent
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ABSTRACT

The effectiveness of self-instructional modules in increasing the social studies knowledge of students enrolled in a teacher education program is reported. Students enrolled in social studies methods courses were divided into an experimental group (n=45) which used the modules and a control group (n=55) which read a textbook chapter dealing with the social sciences. The six self-instructional modules were constructed by consulting introductory college textbooks in history, geography, sociology, economics, political science, and anthropology, as well as social studies methods texts. Each experimental student read some material, answered a question, and checked it with a key. All students took researcher prepared pre- and posttests and the standardized Tests of Academic Progress. Students who used self-instructional modules achieved more than students who learned about social sciences from a textbook. The implication is that methods course instructors can augment regular instruction with self-instruction. (KC)

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A STUDY OF THE EFFECTS OF SELF-INSTRUCTIONAL MODULES ON ACHIEVEMENT IN COLLEGE SOCIAL STUDIES

By

Kent Freeland

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A STUDY OF THE EFFECTS OF SELF-INSTRUCTIONAL MODULES ON ACHIEVEMENT IN COLLEGE SOCIAL STUDIES

Academic performance in public schools across the country has been declining in many areas. A test in social studies given to seventh grade California students revealed that 42 per cent did not know that governments get the right to govern from the people; only 53 per cent knew that Latin America was south of the United States; and 19 per cent thought Latin America was part of the United States (25).

Howard Mehlinger (20) offers some ideas on the decline (between 1969-76) in political knowledge and attitudes which were discovered through testing by the National Assessment of Educational Progress, NAEP. He summarized this area: "American youth have suffered losses in their knowledge about the structure and function of government, in their understanding of the political processes, in their comprehension of the meaning of democracy, and in their commitment to the fundamental principles underlying the American political system" (20: 676).

NAEP (9) results in other subject areas are available: Writing. Between 1969-70 and 1973-74, an overall decline was observed in the coherence and quality of essays written by thirteen and seventeen-year-olds. Seventeen-year-olds were asked to use thinking and writing skills on the 1979-80 test. When invited to compare and analyze literary works, even the most capable students avoided these responses (10).

Math. Although the majority of seventeen-year-olds and young adults can satisfactorily add, subtract, multiply, and divide, they falter when it comes to applying these skills (7). Less than one half of these people could successfully determine the most economical size of a product.

Science. Science knowledge has been declining between 1967 and 1977 for nine, thirteen, and seventeen-year-olds (30).

Reading. Reading abilities of teenagers during the period 1971-80 75 have not improved, but have remained the same (21).

This lack of subject competency exhibited by the youth of the country is also present in adults—even teachers. Garvida (12) surveyed 357 Louisiana elementary teachers and discovered that these respondents had a low rate of correct responses on a map and globe skills test.

Rice (26) reports that not one elementary education graduate out of the twenty-three he sampled at the University of Georgia had taken an upper division social science course.

Many people have done investigations in an attempt to discover what characteristics or qualities make a good teacher. Rosenshine and Furst (27) found that "clarity of presentation" by the teacher correlated highly with gain in student achievement. More recently, clarity has been broken down into explaining terms and directions in an understandable manner (3). This idea of clarity is just part of a larger arena of content knowledge, however.

Vecchio and Costin (31: 175) found some support "that an instructor's academic preparation can predict to some extent how much students will learn and how satisfied with the instruction they will be."

Ryan and Cooper (28) agree that prospective teachers should be very knowledgeable in the disciplines they plan to teach, although they add that transmission of this knowledge to elementary students will not always be a natural consequence. "Of the characteristics believed to differentiate

good and poor teachers, only knowledge of subject matter and pupils and professional knowledge appear to be definitely established as discriminating between good and poor teachers" (23: 98). Teachers must possess three levels of subject matter control: (A) general control, (B) factual control, and (C) fluid control. These involve familiarity with facts, concepts, and generalizations (18).

When investigating teacher behaviors related to student achievement on social science tests, Armento (1) found the highest positive correlations between the above two when a teacher gave a concept definition or when a teacher gave a positive concept example.

In summary, the most effective teachers are knowledgeable in their subject matter (4). "It may be reasonable to assume that a person can teach a subject only if he knows it" (16: 59). Lyons (19) urges that all teachers be literate and have good command of their subject matter.

The current competency based movement (CBTE) in public schools and institutions of higher learning stems from the decline in student performance along with the renewed emphasis in knowledge of what one is teaching. According to recent surveys (24) of American Association of Colleges for Teacher Education (AACTE) institutions, CBTE is not declining, but is slightly increasing. In 1973, sixteen per cent of AACTE institutions had some degree of competency testing in their programs; in 1975, this rose to fifty-two per cent; and in 1977, this was fifty-eight per cent.

Content knowledge in elementary social studies revolves around social science disciplines. The ones most commonly included are history, geography, political science, sociology, anthropology, and economics (5), (11), and (17).

The literature shows that academic performance in many areas (social studies included) is at a low level and needs to be raised. One way to begin is to improve the knowledge of a prospective teacher who will one day be teaching the social science disciplines during social studies instruction.

The purpose of this study was to investigate whether a group of students enrolled in the Teacher Education Program could significantly increase their content knowledge in social studies by completing self-instructional modules on six social science disciplines.

The null hypothesis was that there would be no significant difference in achievement between one group which completed six self-instructional, social science modules and another group which received instruction from the textbook rather than from the modules.

Some terms need identification: Social science disciplines will be defined in this study as subject areas that include history, geography, political science, anthropology, economics, and sociology.

Social studies is used in this study as a collective term referring to the six social science disciplines mentioned above.

Teacher Education Program is a program for all education majors who intend to become teachers. Once a student is enrolled in the program, he must complete certain required professional education courses.

A self-instructional module is a packet which contains information and questions related to the topic. A student was to complete this packet without the assistance of a teacher by reading, answering questions, and checking his own answers.

METHOD

Subjects

All students enrolled in fall and spring semesters in the social studies methods course were included in the study. Approximately half the students were randomly assigned to a group which independently worked through the self-instructional modules. This was the Experimental group. The second (or Control group) included students who were not given the self-instructional modules. Rather, they read a chapter in the textbook which dealt with the social sciences.

Modules

The six self-instructional modules were constructed by this researcher by consulting introductory college textbooks in history (32), geography (6), sociology (29), economics (13), political science (22), and anthropology (14). Social studies methods texts were also used (2) and (17). Each of the modules—to provide validity—was critiqued by an expert in that area.

The pre-test was given to all students early in the semester. A standardized test Tests of Academic Progress (15) was given the next class period to all students. The Control group during the next few weeks read the textbook chapters which dealt with the social sciences. The

Experimental group did not read these chapters, but instead completed the self-instructional modules.

Each of the six modules had the same format. Each student read some material and then answered a question. He wrote his answer on an answer sheet and checked it with a key. He progressed through the module, which took from one half hour to one hour.

Procedures for Analyzing Data

The collected data consisted of the number of correct responses on the pre-test and the post-test which this researcher prepared, along with the number of correct responses on the Houghton Mifflin standardized test, Tests of Academic Progress. All three tests contained sixty questions. A t-test was run to determine if a significant difference occurred between the achievement of the Control group and that of the Experimental group.

RESULTS

The results of the study are presented in Tables 1 and 2.

Tables 1 and 2 show that the Experimental group had a higher gain than the Control group. The negative difference for the Control group and small positive increase for the Experimental group (shown in Table 2) suggest that the post-test was difficult. Nonetheless, there is a significant difference at the .001 level between the two groups.

A Pearson correlation coefficient of .57 with $p < .0001$ exists between the Houghton Mifflin standardized pre-test and the pre-test which this researcher prepared. This correlation coeffieient, along with the fact that experts critiqued the latter, suggests that the researcher-prepared pre-test is an accurate instrument.

TABLE 1

NUMBER OF CORRECT RESPONSES ON SIXTY-ITEM TESTS

	N	Mean
Control Pre-test	55	43.8
Control Post-test	55	40.6
Experimental Pre-test	45	43.1
Experimental Post-test	45	43.4

TABLE 2

COMPARISON OF GAINS ON SIXTY-ITEM TESTS

	N	Mean Difference between Number Correct on Pre- and Post-tests	S.D.	T-value	DF	Probability
Control	55	-3.2	4.9	-3.4	98	$<.0001$
Experimental	45	0.3	5.6			

DISCUSSION

The results of this study indicate that students who used self-instructional modules to work with the various social sciences achieved more than students who learned about these social sciences from a text-book. It appears that this method of instruction is beneficial since it increased the knowledge pre-service teachers acquired about the material they studied. Since social studies methods courses often devote insufficient attention to the content, this approach to teaching can be a successful way to increase subject matter competency. The implication is that a social studies professor can augment his regular instruction by having his students work through self-instructional modules.

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